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RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 1752
PATENT APPLICATION

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q386121

Munehisa FUJITA, et al.

Appln. No.: 08/915,683

Group Art Unit: 1752

Confirmation No.: 1847

Examiner: WALKE, Amanda C.

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Filed: August 21, 1997

For: DIRECT POSITIVE PHOTOGRAPHIC SILVER HALIDE EMULSION AND
COLOR PHOTOGRAPHIC LIGHT-SENSITIVE MATERIAL COMPRISING SAME

RESPONSE UNDER 37 C.F.R. § 1.116

ATTN: BOX AF

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated December 4, 2002, please consider the following

remarks:

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REMARKS

Claims 1, 5-7, and 9 are all the claims pending in the application.

Claims 1, 5-7 and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Evans et al (4,504,570) in view of either Tanemura et al (5,081,009) or Shuto et al (5,110,719) and Tasur et al (5,210,013).

The Examiner's position remained the same as in the non-final Office Action of June 18, 2002.

The Examiner commented that in the new declaration evidence, there is no direct comparison between samples having AgBr cores and AgBrI cores because (i) it is unclear as to what effect compound A, 3,6-dithia-1,8-octadiol has on the properties of the grains, and (ii) there is no discussion of the compound in the specification. Also, the Examiner questioned whether this compound is an additional sulfur sensitizer.

The Examiner further considered that the improved results in D_{\max} and D_{\min} may be explained by the presence of silver iodide in the core of certain samples because Tanemura et al and Shuto et al teach that silver iodide should be avoided in obtaining a high contrast direct positive image, and an increased amount of thiosulfate would also reasonably explain the difference in properties.

The Examiner further considered that Applicants' declaration does not establish the practical significance of the D_{\max} , D_{\min} and negative sensitivity data in light of the teachings of the secondary references and the increased amount of thiosulfate compound.

Applicants respectfully request the Examiner to reconsider in view of the Second Supplemental Declaration Under 37 C.F.R. § 1.132 of Mr. Takefumi Hara submitted herewith and the following remarks.

As described in Applicants' specification, a compound represented by formula (A), (B) or (C) may be incorporated in the system in the form of an aqueous solution if it is a water-soluble

compound, or in the form of a solution in an organic solvent miscible with water such as an alcohol, glycol, ketone, ester and amide (having no adverse effect on photographic characteristics) if it is a water-insoluble or slightly water-soluble compound. Page 44, lines 7-17 of the specification. 3,6-Dithia-1,8-octadiol is such an alcohol for incorporating (A), (B) or (C) in aqueous solution. That is, Compound A is a solvent for a silver halide emulsion, and is not a sulfur sensitizing agent.

In addition, there is discussion of 3,6-dithia-1,8-octadiol in the Examples, for example, in Preparation of Emulsion D6. Page 86 of Applicants' specification.

Further, as set forth in the Response of September 18, 2002, page 4, Compound A, i.e., 3,6-dithia-1,8-octadiol is different from compounds (A), (B) or (C) present during chemical sensitization as set forth in claim 1.

Still further, Mr. Hara states in his Second Supplemental Declaration Under 37 C.F.R. § 1.132, submitted herewith, that Compound A has hitherto been known in this field of art as described, for example, in U.S. Pat. No. 3,574,628, and that Compound A is a solvent for a silver halide emulsion, but not a sulfur sensitizing agent.

The testing data contained in the prior Supplemental Declaration Under 37 C.F.R. § 1.132 submitted on September 18, 2002 are further explained in the Second Supplemental Declaration Under 37 C.F.R. § 1.132 submitted herewith.

In his Second Supplemental Declaration, Mr. Hara explains why, in preparation of Emulsion Nos. 1 to 24, the amount and pBr value of Compound A (3,6-dithia-1,8-octadiol) were

varied. That is, only when the amount and pBr value of Compound A are appropriately varied, emulsions differing from one another in coefficient of variation of the distribution of grain thickness can be prepared. See page 2, first three full paragraphs of the Second Supplemental Declaration.

Mr. Hara further explains, when the respective emulsions are compared, why the difference in properties is ascribable to the difference in the coefficient of variation of the distribution of grain thickness.

Specifically, as indicated in U.S. Pat. No. 3,574,628, the sensitivity and D_{\max} may increase when emulsion grains are prepared using Compound A. However, as shown in the experimentation contained in Mr. Hara's prior Supplemental Declaration under 37 C.F.R. §1.132, the larger the addition amount of Compound A, the larger the "coefficient of variation of the distribution of grain thickness" of the resulting emulsions. The emulsions falling within the scope of the comparative examples have a lower sensitivity and D_{\max} , opposite what is expected. Clearly then, the difference in properties cannot be ascribed to the amount of Compound A.

Regarding the relationship of D_{\max} and negative sensitivity, Mr. Hara provides a detailed explanation in his Second Supplemental Declaration.

Specifically, the negative sensitivity of a core/shell type auto-positive emulsion (direct reversal emulsion) increases when an inside electron trap is weak or the amount of the electron trap is insufficient, and decreases when the inside electron trap is strong or the amount of the electron trap is large. Page 3 of Mr. Hara's Second Supplemental Declaration.

Generally, when the inside electron trap is enhanced and the amount of the electron trap is increased, the D_{\max} of the direct positive image tends to decrease.

In a direct reversal emulsion, when the negative sensitivity increases, problems may arise, such as black spots in a portrait photographed against the background of a glass window by means of a flash. These problems can be solved by decreasing the reversal negative sensitivity. However, in a conventional emulsion, a decrease in D_{\max} of the direct positive image simultaneously deteriorates the image quality.

In the present invention, because D_{\max} of the direct positive image is increased and an increase in reversal negative sensitivity is suppressed, an unexpectedly superior effect is achieved.

In view of the above, Applicants submit that the present invention is not obvious over the prior art references cited by the Examiner, and accordingly, the rejection should be withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. § 1.116
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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